

SYLLABUS FOR PAPER I & II FOR M.B.B.S COURSE

SUBJECT - ANATOMY

PAPER – I

General Anatomy, CNS, Head & Neck, Upper Limb, General Histology,
General Embryology, 20% Applied Anatomy

PAPER – II

Thorax, Abdomen & Pelvis, Lower Limb, Systemic Histology,
Systemic Embryology, Genetics, 20% Applied Anatomy

SUBJECT - PHYSIOLOGY

PAPER – I

Blood, Cardiovascular System, Respiratory System including respiratory
adjustment in Health and Disease, Renal Physiology, Gastro-intestinal System.

PAPER – II

General Physiology, Nerve and Muscle, Neurophysiology, Special Senses,
Autonomic nervous system, Endocrine Physiology, Reproductive Physiology.

SUBJECT - BIOCHEMISTRY

PAPER – I

1. Physical aspects of biochemistry
2. Cellular structure and functions
3. Chemistry of biomolecules
4. Transport across membranes
5. Chemistry of carbohydrate, Lipid, Proteins, Nucleic acid
6. Radioisotopes and their application in Medicine
7. Enzymology
8. Porphyrins
9. Chemistry of respiration
10. Acid base balance
11. Body fluid and electrolyte balance
12. Immune system and immunochemistry
13. Organ functional tests

PAPER – II

1. Bioenergetics
2. Digestion and absorption
3. Metabolism of carbohydrate, Lipid, protein, Nucleic acid, purines & Pyrimidines
4. Biochemical basis of inherited disorders and their sequel
5. Digestion and absorption
6. Diet & nutrition including vitamins & minerals & energy metabolism
7. Hormones (chemistry, synthesis, metabolism)
8. Molecular biology
9. Environmental health hazards
10. Cancer
11. Carcinogenesis
12. Principles of laboratory investigations and instrumentation analysis
13. HIV

SUBJECT - PATHOLOGY

PAPER – I (1st half)

- General Pathology

PAPER – I (2nd half)

- Immunopathology
- Lymphoreticular Pathology
- Haematology
- Clinical Pathology

PAPER – II (1st half)

- Cardiovascular System
- Respiratory System
- Bones & Joints
- Chemical Pathology

PAPER – II (2nd half)

- GIT
- Urinary System
- Breast Pathology
- Reproductive Systems (M & F)
- Hepatobiliary System
- Endocrines and Central Nervour System (Broad concepts only)

SUBJECT - MICROBIOLOGY

PAPER – I

GENERAL MICROBIOLOGY :

1. Introduction to Microbiology
 - a) Classification of Microbes
 - b) Introduction to Bacteriology and Bacterial Taxonomy
2. Morphology :
 - a) Microscopy
 - b) Staining methods
3. Growth & Nutrition
4. Sterilization & Disinfection
5. Culture media & methods
6. Identification of bacteria
7. Bacterial genetics + Recombinant DNA technology
8. Pathogenesis of bacterial diseases
9. Antimicrobial agents

IMMUNOLOGY :

1. Immunity
2. Structure & functions of immune system
3. Immune response & tolerance (Cell mediated immunity)
4. Antigens
5. Antibody
6. Ag-Ab reaction

7. Hypersensitivity
8. Complement
9. Auto immunity – tumor & transplant immunity
10. Immunodeficiency
11. Immunodiagnosis
12. Immunoprophylaxis

BACTERIOLOGY

1. Staphylococcus
2. Streptococcus
3. Pneumococcus
4. Neisseria, Branhamella, Moraxella
5. Corynebacterium
6. Bacillus
7. Clostridium : Anaerobic spore bearer
8. Non sporing anaerobes
9. Enterobacteriaceae I – E. coli, Klebsiella etc.
10. Enterobacteriaceae II – Salmonella
11. Enterobacteriaceae III – Shigella
12. Vibrios, Aeromonas, Plesiomonas
13. Campylobacter, Helicobacter, Spirillum
14. Pseudomonas and non fermenters
15. Yersinia, Pasteurella, Francisella
16. Haemophilus
17. Bordetella & Brucella
18. Mycobacterium I – M. tuberculosis
19. Mycobacterium II – Atypical Mycobacteria
20. Mycobacterium III – M. leprae
21. Spirochaetes I – Treponema
22. Spirochaetes II – Leptospira, Borrelia
23. Actinomyces, Nocardia ...

CLINICAL / APPLIED MICROBIOLOGY

1. PUO
2. UTI
3. Food poisoning, Diarrhoea & dysentery
4. Meningitis
5. STDs
6. Bacteremia & Sepsis
7. Congenital infections
8. Normal flora
9. HAI
10. Hospital waste management
11. Bacteriology of air, water & flood
12. Zoonoses

PAPER-II

VIROLOGY :

1. Introduction of virology
2. Pathogenesis of viral diseases
3. Lab.diagnosis of viral diseases
4. DNA viruses & Bacteriophage
5. Poxvirus
6. Herpesviruses
7. Nonenveloped viruses – Adeno, papilloma, polyoma, parvo etc.
8. Picornaviruses
9. Orthomyxovirus
10. Paramyxovirus
11. Rhabdovirus
12. Hepatitis viruses I
13. Hepatitis viruses II
14. Retroviruses – HIV & AIDS
15. Arboviruses I
16. Arboviruses II
17. Rotavirus & other viruses causing gastroenteritis
18. Coronavirus – SARS
19. Oncogenic viruses
20. Marburg, Ebola & other HMG Viruses
21. Teratogenic viruses – Rubella, others
22. Slow viruses – Prion & prion diseases

PARASITOLOGY :

1. Introduction to Parasitology
2. Protozoal parasites – characteristics, classification & diseases
3. Helminthic parasites
4. Protozoa I – Entamoeba histolytica
5. Free living amoeba
6. Protozoa II – Giardia
7. Trichomonas
8. Leishmania
9. Trypanosomes
10. Plasmodium
11. Coccidia I – Toxoplasma
12. Coccidia II – Cryptosporidium, Cyclospora, Isospora
13. Coccidia III – Sarcosystis & Microsporidia
14. Class Test on Protozoal parasites
15. Cestodes – characteristics, classification & diseases
16. Cestodes I – Taenia
17. Cestodes II – Echinococcus
18. Cestodes III – Hymenolepsis & Diphyllbothrium
19. Trematodes _ - Blood flukes – Schistosomes
20. Trematodes II – Lung flukes – Paragonimus

21. Trematodes III – Hepatic flukes – Chlonorchis & Fasciola
22. Trematodes IV – Intestinal flukes – Fasciolopsis, Gastrodiscoides etc.
23. Characteristics of nematodes – Ascaris
24. Trichuris & Trichinella, Enterobius
25. Strongyloides
26. Hookworms
27. Filarial worm I – Lymphatic
28. Filarial worm II – others
29. Dracunculus
30. Larvae migrans
31. Entomology I

MYCOLOGY :

1. Introduction to Mycology and disease classification
2. Dermatophytosis
3. Subcutaneous mycoses
4. Systemic mycoses and Ols
5. Mycotoxins
6. Antimycotic agents

SUBJECT - PHARMACOLOGY

PAPER – I (1st half)

A) General Pharmacology

1. Approaches to drug discovery and development of new drugs
2. Routes of administration and new drug delivery system
3. Absorption, Distribution & binding of drugs to plasma proteins
4. Pharmacokinetics, Plasma half life and biological half life
5. Biotransformation and excretion of drugs
6. Enzyme induction, enzyme inhibition and completion; and drug interactions
7. Mechanism of drug action and drug-receptor interactions
8. Pharmacogenetics
9. Terratogenicity and Carcinogenicity of drugs
10. Adverse effects of drugs
11. Factors modifying drug action
12. Rational use of drugs and essential drugs

B) Autonomic Nervous System (A.N.S.)

1. Anatomical and physiological consideration of Autonomic Nervous System
2. Cholinergic drugs, Cholinergic receptors and their pharmacological characterization
3. Anticholinergic, ganglion blocking and neuromuscular blocking drugs
4. Irreversible cholinesterases and cholinesterase reactivating drugs
5. Adrenergic drugs, adrenergic receptors and their pharmacological characterization
6. Adrenergic blocking drugs.

C) Drugs affecting blood & Blood formation

1. Haematinics
2. Drugs affecting coagulation

D) Drugs acting on respiratory system

1. Drugs used in Bronchial asthma and anti tussive agents.

PAPER – I (2nd half)

A) Central nervous system (C.N.S.)

1. Physiology and Pharmacology of neuro humoral transmission in the CNS
2. Drug therapy of Parkinsonism
3. Pre-anaesthetic medication, pharmacodynamics and pharmacokinetics of general anesthetic agents.

B) Cardiovascular system

1. Electrophysiology of heart
2. Patho-physiology of cardiac arrhythmias and anti-arrhythmic drugs
3. Pharmacotherapy of congestive heart failure
4. Anti-anginal agents
5. Anti-hypertensive agents.

C) Drugs acting on Kidney

1. Diuretics and anti-diuretics

PAPER – II (1st half)

A) Drugs acting on Gastro-intestinal tract

1. Drugs acting on gastro-intestinal tract
2. Emetics & anti emetics
3. Drugs for constipation & diarrhea

B) Endocrinology

1. Hormones of anterior pituitary gland
2. Thyroid hormones and thyroid inhibitors
3. Insulin, oral hypoglycemic agents and glucagon
4. Pharmacology and therapeutics of corticosteroids
5. Gonadal hormones and their antagonists, oral contraceptive pills
6. Oxytocin and drugs acting on uterus

PAPER – II (2nd half)

A) Autacoids and related drugs

1. Histamine & anti-histaminics
2. Drug affecting coagulation bleeding and thrombosis
3. Hypolipidemic drugs

B) Antimicrobial agents (AMAS)

1. General concept of chemotherapy and mechanism of action of AMAS
2. Sulphonamides, co-trimoxazole and quinolones
3. β - Lactam antibiotics
4. Tetracyclines and chloramphenicol
5. Aminoglycoside antibiotics
6. Miscellaneous antibiotics
7. Chemotherapy of tuberculosis and leprosy
8. Anti-viral agents
9. Anti-fungal agents
10. Chemotherapy of malaria and other protozoan diseases
11. Chemotherapy of helminthiasis

C) Chemotherapy of Neoplastic diseases

D) Autacoids and related drugs

1. Histamine and antihistaminics
2. 5-HT and its antagonists and drug therapy of migraine
3. Prostaglandins, leukotrienes and platelet activating factor
4. Renin-angiotensin system and plasma kinins

SUBJECT - COMMUNITY MEDICINE

PAPER – I

- Concepts of health and disease
- Epidemiology
- Screening
- Epidemiology of communicable and Non-communicable disease
- Health information and Biostatistics
- Environmental science including Hospital waste management and disaster management
- Hospital acquired infection
- School health
- Urban health

PAPER – II

- Demography and Family planning
- MCH
- Nutrition and health
- Social science including behavioural science related to health
- Occupational health
- Communication including counseling
- Genetics
- Health care delivery system
- International health
- Health planning and management
- National health programmes
- Mental health
- Geriatrics

SUBJECT - MEDICINE

PAPER – I (1st half)

Disease of Cardio – vascular system, Disease of the blood, Diseases of the kidney and genitor urinary stem and Deficiency diseases

PAPER – I (2nd half)

Endocrine and metabolic diseases, Diseases of the connective tissue joints and bones immunology

PAPER – II (1st half)

Diseases of the alimentary tract and pancrease, diseases of the liver and biliary stems, Helminthiasis and Diseases due to infection including AIDS

PAPER – II (2nd half)

Diseases of the respiratory system including tuberculosis, Diseases of the nervous system, Poisoning, Psychiatry, Dermatology and Leprosy

SUBJECT - OBSTETRICS & GYNAECOLOGY

OBSTETRICS - PAPER –I

1. Introduction
2. Obstetric history taking and examination
3. Conception, implantation and development of placenta, fetal circulation, abnormalities of placenta
4. Foetal skull and bony pelvis
5. Diagnosis of pregnancy
6. Physiological changes associated with pregnancy
7. Ante-natal care
8. Early pregnancy loss and its management (Abortions)
9. Physiology of labour
10. Mechanism of labour
11. Management of labour
12. Complications of 3rd stage of labour
13. Abnormal labour e.g. Prolonged labour / obstructed labour
14. Pre-term labour
15. Induction of labour
16. Pre-maturity
17. Post-maturity
18. Conduction of normal delivery
19. Operation delivery
20. Forceps delivery
21. Vaccum delivery
22. Caesarean section
23. Ante-partum haemorrhage
24. Hydramnios
25. Hyperemesis gravidarum
26. Medical Disorder associated with pregnancy e.g.
 - Pregnancy with anaemia
 - Pregnancy with heart disease
 - Pregnancy with diabetes
 - Pregnancy with jaundice / hepatitis
 - Renal problems during pregnancy
 - Pyrexia in pregnancy
27. Hypertensive disorders of pregnancy e.g.
 - PET
 - Eclampsia
 - Essential hypertension
28. Obstetric shock
29. Intra uterine growth retardation and its management
30. Fetal distress and its management
31. Fetal Monitoring
32. Fetal presentations
33. Breech presentation
34. Occipito posterior position
35. Brow presentation

36. Face presentation
37. Cord prolapsed / compound presentation
38. Transverse lie/ybstable lie
39. Multiple pregnancy
40. Puerperium (normal and abnormal)
41. Examination of the new-born baby
42. Resuscitation of new-born
43. Minor problems of the new-born
44. Breast feeding and its importance
45. Obstetric injuries / ruptured uterus
46. Haematological disorder of pregnancy e.g. (i) Rh incompatibility
(ii) Thelassemia major/minor
47. Role of Ultrasound in obstetric
48. Foetal congenital abnormalities
49. Vital statistics.

GYNAECOLOGY - PAPER – II

1. Introduction
2. Anatomy of female : (i) Genital organs (ii) Development of female genital organs
3. Puberty and adolescence
4. Ovulation and its clinical importance
5. Normal menstruation
6. Menstrual abnormalities
7. Gynaecological history taking and examination
8. Minor gynaecological operative procedures
9. Amenorrhoea
10. Infertility
11. Contraception
12. Ectopic pregnancy
13. Trophoblastic tumours
14. Vulval lesions
15. Tumours of vagina
16. Tumours of cervix
17. Tumours of uterus
18. Tumours of ovaries
19. Tumours of fallopian tubes
20. Menopause, Hormone replacement therapy
21. Genital prolapsed
22. Pelvic floor injuries
23. Urogynaecology
24. Problems of marriage and sex
25. Vaginal dischanrges
26. Infections of female genital tract : i) Infections of upper genital tract
ii) Infections of lower genital tract
27. Pre-operative preparations
28. Post-operative complications and its management
29. Role of USG in gynaecology

SUBJECT - SURGERY

PAPER – I

Group I	History of Surgery : Introduction to clinical examination of patients; Details of history taking; Examination of a swelling; Ulcer; Hernia; Chronic abdomen; Examination of swelling of head and neck including Thyroid; Parotids etc; Examination of the breast.
Group II	Scope and evaluation of modern surgery; Systemic reaction and metabolic response to trauma; Wounds; Sepsis; Acute infections; Tetanus; Gas gangrene; Antibiotics and chemotherapy in surgery; Hospital infection (Nosocomial infection); Pre and Post Operative care and Sterilization techniques.
Group III	Chronic specific infections; Tuberculosis, Filariasis; Fistula; Sinus; Ulcer; Haemorrhage; Shock; Blood transfusion; Fluid and electrolyte; Acid-base balance; Nutritional support in surgical patients; Venereal disease.
Group IV	Diseases of head; Head injury; Hydrocephalus; Spine; Meningocele; Diseases of muscles; Tendons and Bones; Hand infection; Peripheral nerves.
Group V	Basic considerations of tumour; Cyst; Mouth; Tongue; Salivary gland; Lymphatics and Lymph nodes; Hodgkin's disease; Non Hodgkin's lymphoma
Group VI	Thorax; Thymus; Pleura; Lungs; Heart and great vessels; Oesophagus; Diaphragm; Peripheral vascular disease; Buerger's Disease; Raynaud's disease; Thromboembolism.
Group VII	Thermal injury; Radiation injury; skin coverage; diseases of skin-melanoma; face; lip, Palate; Gum and Jaw injuries of the foot.
Group VIII	Basis considerations of Oncology; Radiation therapy; Cancer chemotherapy; Hormone replacement therapy; Immunology.
	Orthopaedics

PAPER – II

Group IX	Stomach; Duodenum; small intestine; intestinal obstruction; Pancreas; Liver and spleen.
Group X	Hernia; Appendix; Colon; Rectum and anal canal; Peritoneum; Umbilicus and anterior abdominal wall.
Group XI	(Urology) : Adrenal gland; Acute & chronic renal failure; Kidney function tests; Diseases of kidney including congenital anomalies; Urethra; Urinary bladder; Prostate; Seminal vesicles; Urethra; Scrotum and Testes; Penis; Basic considerations of renal & renal & organ transplantation..
Group XII	Thyroid : Thyroglossal tract and Parathyroid: Diseases of the breast